

TABLE II

## PREDICTED COVERAGE

**THE MOODY BIBLE INSTITUTE OF CHICAGO  
APPLICATION FOR A NONCOMMERCIAL FM STATION  
CROSSVILLE, TENNESSEE**

Channel 207C3    0.500 kW Max-DA (V)    425.2 Meters

<u>Azimuth</u> <u>°True</u>	<u>HAAT</u> <u>(m)</u>	<u>ERP</u> <u>(dBk)</u>	<u>60 dBu Contour</u> <u>(km)</u>
0	327.8	-3.0	27.7
15	354.0	-3.0	28.9
30	379.1	-3.0	29.9
45	315.2	-3.0	27.2
60	394.8	-3.0	30.4
75	461.7	-3.0	32.9
90	469.4	-3.0	33.2
105	472.4	-3.0	33.4
120	524.5	-3.0	35.5
135	526.8	-3.0	35.6
150	495.4	-4.0	32.4
165	406.0	-6.0	26.0
180	359.4	-9.0	20.8
195	323.7	-12.0	16.6
210	315.1	-15.0	13.8
225	622.0	-17.7	16.5
240	607.4	-17.0	17.1
255	432.9	-14.0	17.0
270	395.9	-11.0	19.4
285	378.2	-8.0	22.6
300	379.6	-5.0	26.7
315	384.8	-3.5	29.2
330	372.2	-3.0	29.6
345	353.3	-3.0	28.8

Ground elevation at site A.M.S.L.	896.0 Meters
Average elevation of terrain (3-16 km)	504.8 Meters
Effective antenna height above average terrain	425.2 Meters <u>1/</u>
Effective antenna height above ground level	34.0 Meters
Effective antenna height A.M.S.L.	930.0 Meters
Overall tower height above ground level	48.8 Meters
Overall tower height A.M.S.L.	944.8 Meters

Coordinates

North Latitude: 35° 46' 38"  
West Longitude: 84° 58' 34"

1/ HAAT based on standard eight radials.

LECHMAN & JOHNSON, INC.

# TABLE III

## FM ALLOCATION STUDY

### THE MOODY BIBLE INSTITUTE OF CHICAGO APPLICATION FOR A NONCOMMERCIAL FM STATION CROSSVILLE, TENNESSEE

Channel 207C3 0.500 kW Max-DA (V) 425.2 Meters

Channel 207C1  
WLRH(FM), Huntsville, Alabama  
100 kW ERP / 247 m HAAT  
34° 37' 41" N/86° 30' 59" W

<u>Azimuth °True</u>	<u>HAAT (m)</u>	<u>ERP (dBk)</u>	<u>Predicted Contours (km)</u>	
			<u>60 dBu 1/</u>	<u>40 dBu 2/</u>
30	233.8	20	66.8	165.4
45	268.7	20	69.7	169.0
60	267.2	20	69.6	168.9

Channel 205C  
WMBW(FM), Chattanooga, Tennessee  
98 kW ERP / 460 m HAAT  
34° 57' 43" N/85° 22' 40" W

<u>Azimuth °True</u>	<u>HAAT (m)</u>	<u>ERP (dBk)</u>	<u>Predicted Contours (km)</u>	
			<u>80 dBu 2/</u>	<u>60 dBu 1/</u>
0	428.3	19.9	41.5	81.5
15	531.0	19.9	46.7	88.4
30	452.7	19.9	42.9	83.3
45	504.2	19.9	45.4	86.6
60	521.8	19.9	46.3	87.8

## FM ALLOCATION STUDY

THE MOODY BIBLE INSTITUTE OF CHICAGO  
APPLICATION FOR A NONCOMMERCIAL FM STATION  
CROSSVILLE, TENNESSEE

Channel 207C3 0.500 kW Max-DA (V) 425.2 Meters

Channel 209C1  
WDYN(FM), Chattanooga, Tennessee  
BPED-880217IA  
100 kW ERP / 250 m HAAT  
35° 10' 17" N/85° 18' 58" W

<u>Azimuth °True</u>	<u>HAAT (m)</u>	<u>ERP (dBk)</u>	<u>Predicted Contours (km)</u>	
			80 dBu 2/	60 dBu 1/
0	118.1	20	21.7	53.9
15	135.5	20	23.4	56.4
30	143.6	20	24.0	57.4
45	162.3	20	25.6	59.8
60	407.2	20	40.5	80.1
75	416.5	20	41.1	80.8

Channel 209C1  
WDYN(FM), Chattanooga, Tennessee  
62 kW ERP / 250 m HAAT  
35° 10' 17" N/85° 18' 58" W

<u>Azimuth °True</u>	<u>HAAT (m)</u>	<u>ERP (dBk)</u>	<u>Predicted Contours (km)</u>	
			80 dBu 2/	60 dBu 1/
0	118.1	17.9	18.7	49.5
15	135.5	17.9	20.4	52.0
30	143.6	17.9	21.1	53.0
45	162.3	17.9	22.7	55.4
60	407.2	17.9	35.7	75.2
75	416.5	17.9	36.3	75.9

## FM ALLOCATION STUDY

THE MOODY BIBLE INSTITUTE OF CHICAGO  
APPLICATION FOR A NONCOMMERCIAL FM STATION  
CROSSVILLE, TENNESSEE

Channel 207C3 0.500 kW Max-DA (V) 425.2 Meters

Proposed Channel 207C3  
Crossville, Tennessee  
0.500 kW Max-DA (V) ERP / 425.2 m HAAT  
35° 46' 38" N/84° 58' 34" W

Azimuth °True	HAAT (m)	ERP (dBk)	Predicted Contours (km)		
			80 dBu 2/	60 dBu 1/	40 dBu 2/
150	495.4	-4.0	9.5	32.4	92.0
165	406.0	-6.0	7.6	26.0	78.1
180	359.4	-9.0	5.7	20.8	65.4
195	323.7	-12.0	4.3	16.2	54.2
210	315.1	-15.0	3.3	13.8	45.8
225	622.0	-17.7	2.7	16.5	57.6
240	607.4	-17.0	2.9	17.1	59.0
255	432.9	-14.0	3.9	17.0	57.0
270	395.9	-11.0	5.0	19.4	62.7
285	378.2	-8.0	6.3	22.6	69.8

1/ F(50,50) Propagation curves.

2/ F(50,10) Propagation curves.

TABLE IV

TV CHANNEL 6 INTERFERENCE STUDY

THE MOODY BIBLE INSTITUTE OF CHICAGO  
APPLICATION FOR A NONCOMMERCIAL FM STATION  
CROSSVILLE, TENNESSEE

Channel 207C3 0.500 kW Max-DA (V) 425.2 Meters

<u>TV Contour (dBu)</u>	<u>FM to Ch. 6 Ratio U/D</u>	<u>Interfering FM Contour</u>
47	20.3	67.3
48	18.0	66.0
49	17.3	66.3
50	16.0	66.0
51	15.0	66.0
52	13.8	65.8
53	12.8	65.8
54	12.0	66.0
55	11.0	66.0
56	10.2	66.2
57	9.4	66.4
58	8.5	66.5
59	7.7	66.7
60	7.0	67.0

## TV CHANNEL 6 INTERFERENCE STUDY

THE MOODY BIBLE INSTITUTE OF CHICAGO  
APPLICATION FOR A NONCOMMERCIAL FM STATION  
CROSSVILLE, TENNESSEE

Channel 207C3 0.500 kW Max-DA (V) 425.2 Meters

WATE-TV, Knoxville, Tennessee  
100 kW ERP/454 Meters  
36° 0' 13" N/83° 56' 35" W

Azimuth °True	Haat m	F(50,50) TV Contour Distance (km)						
		<u>47</u>	<u>48</u>	<u>49</u>	<u>50</u>	<u>51</u>	<u>52</u>	<u>53</u>
210	477.0	118.4	115.3	112.3	109.6	107.0	104.4	101.8
225	467.9	117.6	114.4	111.5	108.9	106.3	103.7	101.0
240	453.5	116.2	112.9	110.3	107.7	105.1	102.5	99.9
255	437.9	114.7	111.7	109.1	106.5	103.9	101.2	98.6
270	437.2	114.7	111.7	109.0	106.4	103.8	101.2	98.6
285	448.3	115.7	112.5	109.9	107.3	104.7	102.1	99.5
		<u>54</u>	<u>55</u>	<u>56</u>	<u>57</u>	<u>58</u>	<u>59</u>	<u>60</u>
		99.2	96.5	94.3	92.0	89.7	87.4	85.1
		98.4	95.9	93.6	91.4	89.1	86.8	84.5
		97.3	94.9	92.7	90.4	88.1	85.9	83.6
		96.1	93.8	91.5	89.3	87.0	84.7	82.4
		96.0	93.8	91.5	89.2	86.9	84.7	82.4
		96.9	94.6	92.3	90.0	87.8	85.5	83.2

## TV CHANNEL 6 INTERFERENCE STUDY

THE MOODY BIBLE INSTITUTE OF CHICAGO  
APPLICATION FOR A NONCOMMERCIAL FM STATION  
CROSSVILLE, TENNESSEE

Channel 207C3 0.500 kW Max-DA (V) 425.2 Meters

Proposed Crossville, Tennessee  
Channel 207C3, 0.500 kW ERP (DA) V, 425.2 m  
35° 46' 38" N/84° 58' 34" W

Section 73.525 (e) (4) (i), Vertical Polarization Only  
ERP = 500 Watts / 40 = 12.5 Watts (Max. DA)

Azimuth °True	HAAT m	ERP (dBk)	F(50,10) FM Contour (km) <u>1/</u>						
			65.8	66.0	66.2	66.4	66.5	66.7	66.8
0	327.8	-19.0	7.7	7.6	7.5	7.3	7.3	7.2	7.1
15	354.0	-19.0	7.9	7.8	7.7	7.6	7.5	7.4	7.3
30	379.1	-19.0	8.2	8.0	7.9	7.8	7.7	7.6	7.5
45	315.2	-19.0	7.6	7.4	7.3	7.2	7.2	7.1	7.0
60	394.8	-19.0	8.3	8.2	8.0	7.9	7.8	7.7	7.6
75	461.7	-19.0	8.8	8.6	8.5	8.4	8.3	8.1	8.1
90	469.4	-19.0	8.8	8.7	8.5	8.4	8.3	8.2	8.1
105	472.4	-19.0	8.8	8.7	8.5	8.4	8.3	8.2	8.2
120	524.5	-19.0	9.1	8.9	8.8	8.6	8.6	8.4	8.4
135	526.8	-19.0	9.1	8.9	8.8	8.6	8.6	8.4	8.4
150	495.4	-20.0	8.2	8.1	8.0	7.8	7.8	7.6	7.5
165	406.0	-22.0	6.5	6.4	6.3	6.2	6.1	6.0	6.0
180	359.4	-25.0	4.9	4.8	4.7	4.7	4.6	4.5	4.5
195	323.7	-28.0	3.7	3.6	3.5	3.5	3.4	3.4	3.3
210	315.1	-31.0	2.8	2.7	2.7	2.6	2.6	2.5	2.5
225	622.0	-33.7	2.3	2.2	2.2	2.1	2.1	2.1	2.0
240	607.4	-33.0	2.4	2.4	2.3	2.3	2.3	2.2	2.2
255	432.9	-30.0	3.2	3.2	3.1	3.0	3.0	3.0	2.9
270	395.9	-27.0	4.2	4.2	4.1	4.0	4.0	3.9	3.9
285	378.2	-24.0	5.4	5.3	5.3	5.2	5.1	5.0	5.0
300	379.6	-21.0	6.9	6.8	6.7	6.6	6.5	6.4	6.4
325	384.8	-19.5	7.9	7.8	7.6	7.5	7.4	7.3	7.3
330	372.2	-19.0	8.1	8.0	7.9	7.7	7.7	7.5	7.5
345	353.3	-19.0	7.9	7.8	7.7	7.6	7.5	7.4	7.3

1/ Distance less than 15 km, F(50,50) curves used.

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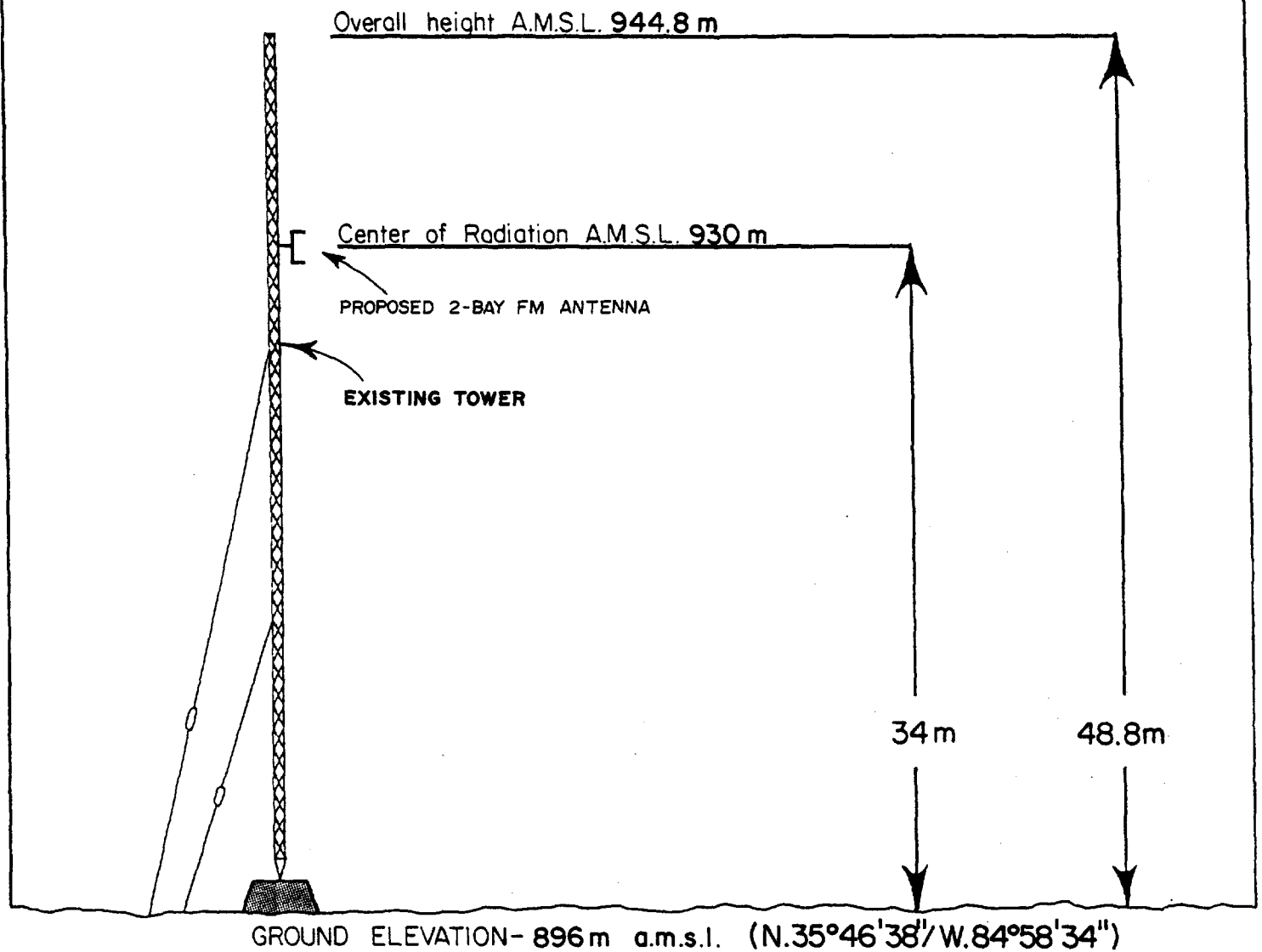


EXHIBIT VB-1

THE MOODY BIBLE INSTITUTE OF CHICAGO  
APPLICATION FOR A NONCOMMERCIAL FM STATION  
CROSSVILLE, TENNESSEE

Channel 207C3 0.500 kW Max-DA (V) 425.2 Meters

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## **EXHIBIT VB-2**

### **INTERFERENCE STUDY**

#### **THE MOODY BIBLE INSTITUTE OF CHICAGO APPLICATION FOR A NONCOMMERCIAL FM STATION CROSSVILLE, TENNESSEE**

**Channel 207C3 0.500 kW Max-DA (V) 425.2 Meters**

It is proposed to locate the FM Channel 207C3 operation on an existing tower located on Hinch Mountain. The tower is managed by Motorola for its common carrier facilities. There are numerous communication services in the vicinity of the proposed operation, none of which are broadcast. However, the proposed operation is not expected to have an adverse effect upon any communication facilities, either co-located or in the general vicinity. The applicant will address all complaints of alleged interference within its blanketing contour as established by Section 73.318 of the Rules and resolve such complaints satisfactorily to the complainant provided a device that is malfunctioning is not excluded in this statement. The applicant's telecommunication consultant is not aware of any cable headend facilities within the blanketing contour. The proposed operation is not expected to cause receiver-induced intermodulation interference within 10 km of the proposed site. If any RITOIE occurs as a result of the installation of the proposed facilities, the applicant will take steps to resolve such alleged interferences. The proposed facility is not expected to cause RITOIE.

Should interference occur due to the direct results of the construction of this FM facility, the applicant will take the necessary steps to correct the interference and resolve the issue of interference.

DOCUMENT OFF-LINE

This page has been substituted for one of the following:

~~An~~ An oversize page or document (such as a map) which was too large to be scanned into the RIPS system.

- o Microfilm, microform, certain photographs or videotape.

- o Other materials which, for one reason or another, could not be scanned into the RIPS system.

The actual document, page(s) or materials may be reviewed by contacting an Information Technician. Please note the applicable docket or rulemaking number, document type and any other relevant information about the document in order to ensure speedy retrieval by the Information Technician.

3 maps - of Tennessee

**EXHIBIT VB-6**

**DIRECTIONAL ANTENNA INFORMATION**

**THE MOODY BIBLE INSTITUTE OF CHICAGO  
APPLICATION FOR A NONCOMMERCIAL FM STATION  
CROSSVILLE, TENNESSEE**

**Channel 207C3 0.500 kW Max-DA (V) 425.2 Meters**

It is proposed to install a directional antenna on an existing tower. An envelope design is proposed such that the radiated fields would not cause predicted objectional interference to other facilities. The suppression of the proposed directional antenna is within the ratio of maximum to minimum radiation in the horizontal plane of 15 decibels as required by Section 73.510(b) of the Rules. The horizontal pattern does not exceed a variation of 2 dB per 10° of azimuth. If the applicant is successful in obtaining a construction permit for these facilities, the proposed directional antenna system envelope will be submitted to various antenna manufacturers to design a pattern that fits within that envelope. All appropriate patterns will be submitted to the Commission when the license application is filed with the FCC. Should the Commission require such information prior to licensing, the applicant hereby requests a waiver of the Rules whereby such waiver is supported by the above statement.

Exhibit VB-6, Page 2, is a tabulation of the relative fields for the proposed directional antenna system with the ERP expressed in dBk and kW. Exhibits VB-6, Page 3, and VB-6, Page 4, are polar plots of the horizontal plane pattern in relative field and dBk, respectively.

## DIRECTIONAL ANTENNA INFORMATION

THE MOODY BIBLE INSTITUTE OF CHICAGO  
 APPLICATION FOR A NONCOMMERCIAL FM STATION  
 CROSSVILLE, TENNESSEE

Channel 207C3 0.500 kW Max-DA (V) 425.2 Meters

<u>Azimuth</u>	<u>Rel. Fld.</u>	<u>dB</u>	<u>dBk</u>	<u>kW</u>
0	1.0000	0	-3.00	0.501
10	1.0000	0	-3.00	0.501
20	1.0000	0	-3.00	0.501
30	1.0000	0	-3.00	0.501
40	1.0000	0	-3.00	0.501
45	1.0000	0	-3.00	0.501
50	1.0000	0	-3.00	0.501
60	1.0000	0	-3.00	0.501
70	1.0000	0	-3.00	0.501
80	1.0000	0	-3.00	0.501
90	1.0000	0	-3.00	0.501
100	1.0000	0	-3.00	0.501
110	1.0000	0	-3.00	0.501
120	1.0000	0	-3.00	0.501
130	1.0000	0	-3.00	0.501
135	1.0000	0	-3.00	0.501
140	1.0000	0	-3.00	0.501
150	0.8913	-1.0	-4.00	0.398
160	0.7943	-2.0	-5.00	0.316
170	0.6310	-4.0	-7.00	0.200
180	0.5012	-6.0	-9.00	0.126
190	0.3981	-8.0	-11.00	0.079
200	0.3162	-10.0	-13.00	0.050
210	0.2512	-12.0	-15.00	0.032
220	0.1995	-14.0	-17.00	0.020
225	0.1841	-14.7	-17.70	0.017
230	0.1778	-15.0	-18.00	0.016
240	0.1995	-14.0	-17.00	0.020
250	0.2512	-12.0	-15.00	0.032
260	0.3162	-10.0	-13.00	0.050
270	0.3981	-8.0	-11.00	0.079
280	0.5012	-6.0	-9.00	0.126
290	0.6310	-4.0	-7.00	0.200
300	0.7943	-2.0	-5.00	0.316
310	0.8913	-1.0	-4.00	0.398
315	0.9441	-0.5	-3.50	0.447
320	1.0000	0	-3.00	0.501
330	1.0000	0	-3.00	0.501
340	1.0000	0	-3.00	0.501
350	1.0000	0	-3.00	0.501

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RELATIVE FIELD PATTERN

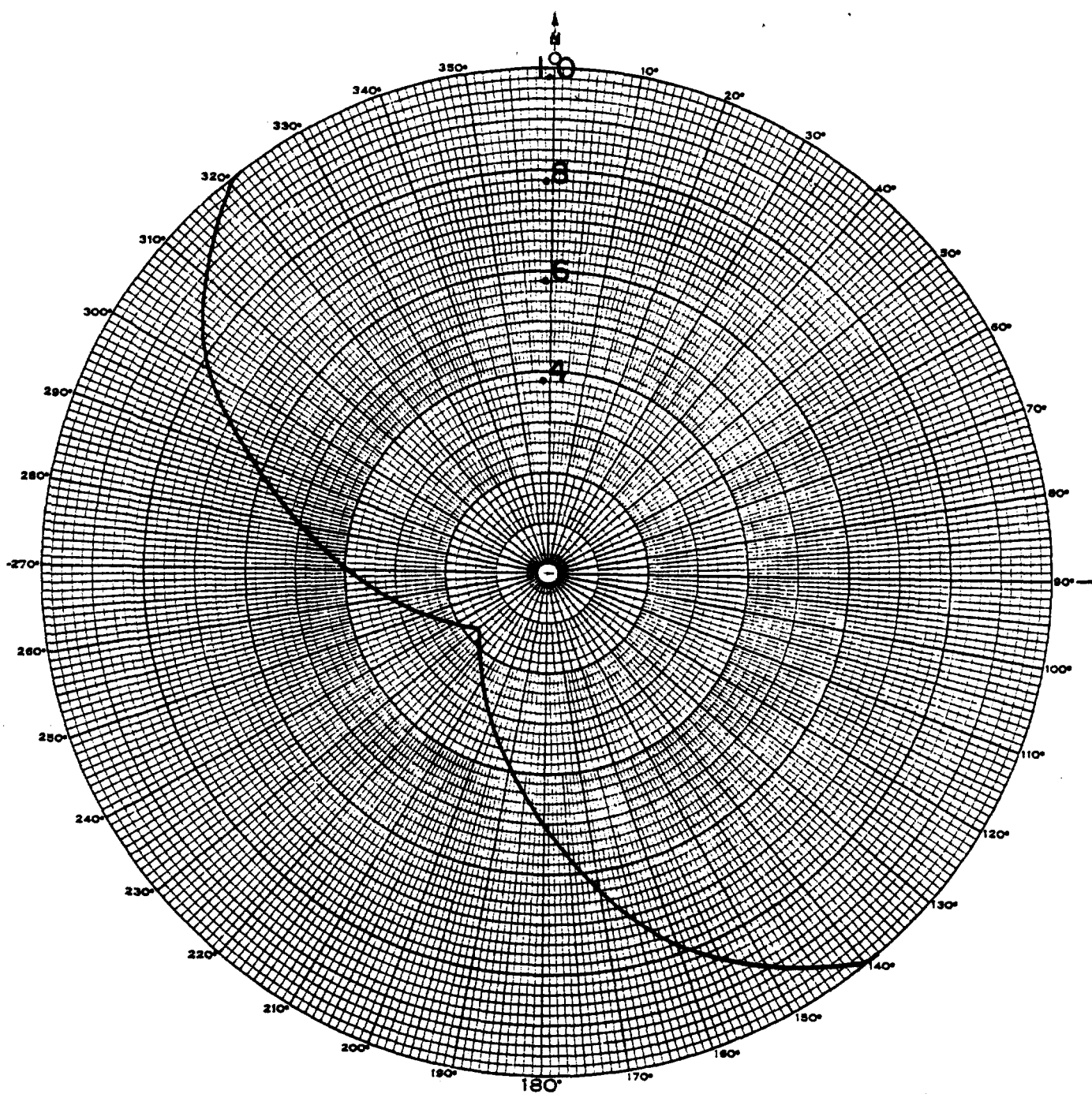


EXHIBIT VB-6 (PAGE 3)

THE MOODY BIBLE INSTITUTE OF CHICAGO  
APPLICATION FOR A NONCOMMERCIAL FM STATION  
CROSSVILLE, TENNESSEE  
Channel 207C3 0.500 kW Max-DA (V) 425.2 Meters

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JULY 1992

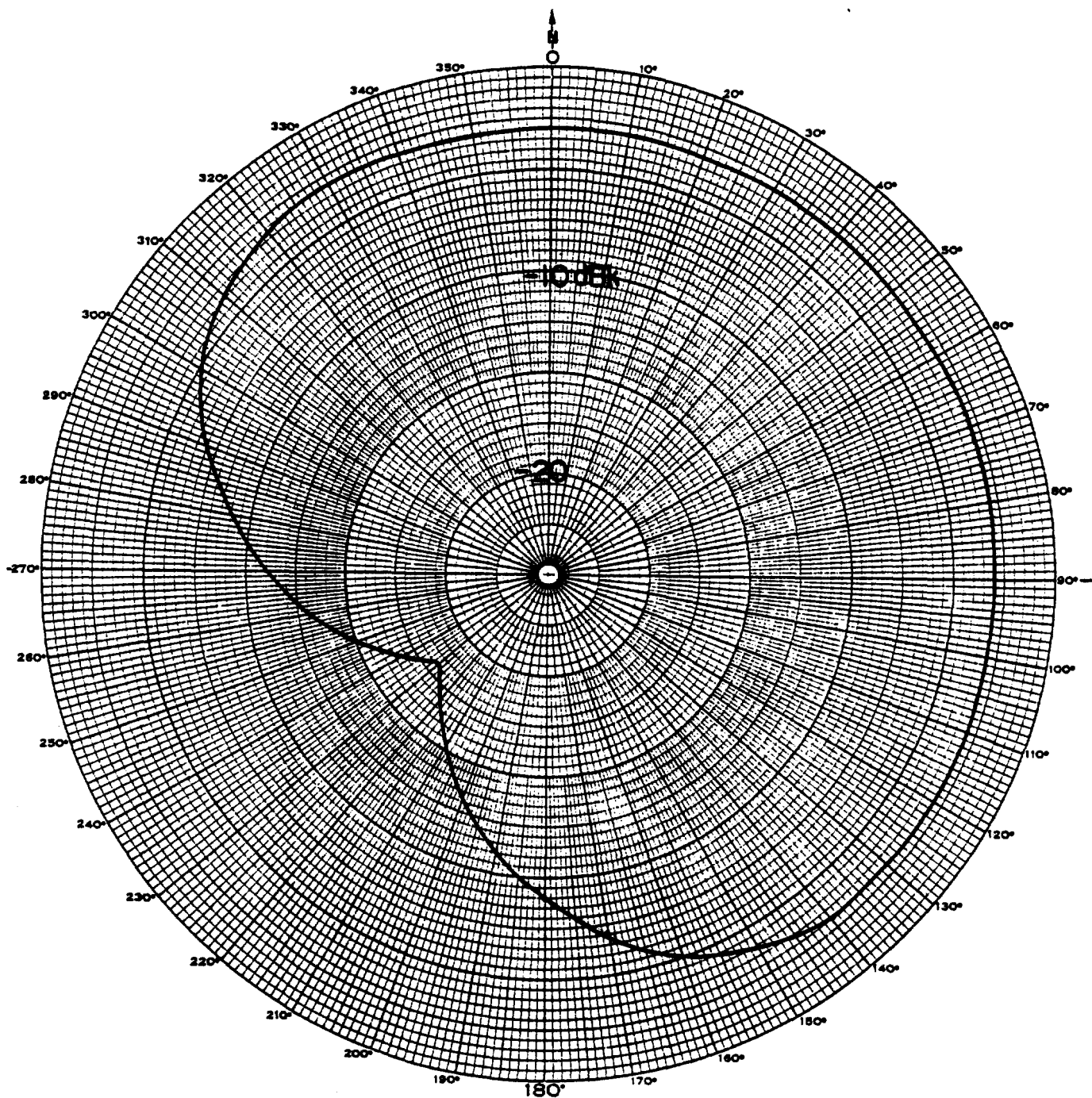


EXHIBIT VB-6 (PAGE 4)

THE MOODY BIBLE INSTITUTE OF CHICAGO  
APPLICATION FOR A NONCOMMERCIAL FM STATION  
CROSSVILLE, TENNESSEE

Channel 207C3 0.500 kW Max-DA (V) 425.2 Meters

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## EXHIBIT VB-7

### RADIOFREQUENCY RADIATION STUDY

#### THE MOODY BIBLE INSTITUTE OF CHICAGO APPLICATION FOR A NONCOMMERCIAL FM STATION CROSSVILLE, TENNESSEE

Channel 207C3 0.500 kW Max-DA (V) 425.2 Meters

Part 73 of the FCC Rules and Regulations was amended, effective January 1, 1986 to implement the National Environmental Policy Act of 1969 (NEPA). The rule amendment identifies human exposure to RF radiation as an issue for explicit consideration when evaluating potential environmental effects of certain facilities regulated by the FCC.

Using Equation 4, page 8 of OST Bulletin No. 65, the rf field was computed as follows:

$$S = \frac{(0.64)(EIRP)}{\pi R^2}$$

$$S = \frac{(0.64)(1.64)(500 \text{ Watts})(1,000 \text{ mW/W})}{\pi(3,400 \text{ cm})^2}$$

$$S = 0.0145 \text{ mW/cm}^2$$

For the proposed FM facility, the total ERP is 500 Watts (vertical polarization only) and the center of radiation is 34 meters (3400 cm). Therefore, power density for the FM facility is 0.0145 mW/cm<sup>2</sup>.

#### Conclusion

The computation of the power density for the proposed FM station was performed in accordance with OST Bulletin No. 65, Evaluating Compliance with FCC specified Guidelines for Human Exposure to Radiofrequency Radiation. The power density of the proposed FM facility is 0.0145 mW/cm<sup>2</sup>. Since this value is less than 1.0, the proposed facility is in compliance with OST Bulletin No. 65 and the ANSI standards.

Should technical personnel or any authorized person or persons be required to access the tower, power to the site will be reduced or turned off, as necessary, to comply with ANSI guidelines and FCC Rules and Regulations concerning human exposure to radiofrequency radiation.

JULY 1992

MORGAN

PUTNAM

CUMBERLAND

WHITE

TV-6 INTERFERENCE AREA

(N.35°46'38"/W.84°58'34")

BUREN

BLED SOE

RHEA

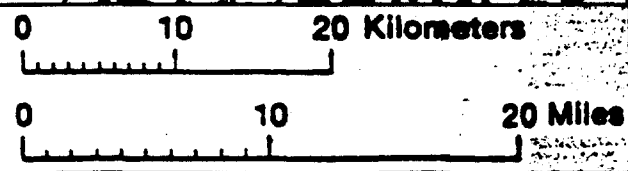
ROANE

EXHIBIT VB-8

THE MOODY BIBLE INSTITUTE OF CHICAGO  
APPLICATION FOR A NONCOMMERCIAL FM STATION  
CROSSVILLE, TENNESSEE

Channel 207C3 0.500 kW Max-DA (V) 425.2 Meters

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(301) 390-0900



QUATCHIE

POLK



THE MOODY BIBLE INSTITUTE OF CHICAGO  
APPLICATION FOR A NONCOMMERCIAL FM STATION  
CROSSVILLE, TENNESSEE

Channel 207C3 0.500 kW Max-DA (V) 425.2 Meters

Population Count Within Predicted Interference Area

<u>County</u>	<u>Total</u> <u>Population 1/</u>	<u>%</u> <u>Coverage 2/</u>	<u>Interference</u> <u>Population</u>
Cumberland			
Lantana Division	3194	12.8	409
Crab Orchard Division	2084	14.5	302
Crossville	6727	2.8	188
Bledsoe			
Walden Ridge Division	1752	9.1	159
Rhea			
Spring City Division	6082	7.8	475
		Total:	1533

1/ 1980 Population figures and MCD maps used. 1990 Census Population booklets and MCD maps not available for purchase from CPO nor the Census Bureau.

2/ The percent value was computed using a calibrated polar planimeter.

## Section V-B - FM BROADCAST ENGINEERING DATA

FOR COMMISSION USE ONLY

File No. \_\_\_\_\_

ASB Referral Date \_\_\_\_\_

Referred by \_\_\_\_\_

Name of Applicant

THE MOODY BIBLE INSTITUTE OF CHICAGO

Call letters (if issued)

NEW

Is this application being filed in response to a window? ☐ Yes ☒ No

If Yes, specify closing date: N/A

Purpose of Application: (check appropriate boxes)

☒ Construct a new (main) facility☐ Construct a new auxiliary facility☐ Modify existing construction permit for main facility☐ Modify existing construction permit for auxiliary facility☐ Modify licensed main facility☐ Modify licensed auxiliary facility

If purpose is to modify, indicate below the nature of change(s) and specify the file number(s) of the authorizations affected.

☐ Antenna supporting-structure height☐ Effective radiated power☐ Antenna height above average terrain☐ Frequency☐ Antenna location☐ Class☐ Main Studio location☐ Other (Summarize briefly)

File Number(s) \_\_\_\_\_

## 1. Allocation:

Channel No.	Principal community to be served:		
	City	County	State
207	Crossville	Cumberland	TN

Class (check only one box below)

<input type="checkbox"/> A	<input type="checkbox"/> B1	<input type="checkbox"/> B	<input checked="" type="checkbox"/> C3
<input type="checkbox"/> C2	<input type="checkbox"/> C1	<input type="checkbox"/> C	<input type="checkbox"/> D

## 2. Exact location of antenna.

- (a) Specify address, city, county and state. If no address, specify distance and bearing relative to the nearest town or landmark.  
Approx. 8 km SW of Grassy Cove, Tennessee, atop Hinch Mountain, Cumberland Co.
- (b) Geographical coordinates (to nearest second). If mounted on element of an AM array, specify coordinates of center of array. Otherwise, specify tower location. Specify South Latitude or East Longitude where applicable; otherwise, North Latitude or West Longitude will be presumed.

Latitude	35°	46'	38"	Longitude	84°	58'	34"
----------	-----	-----	-----	-----------	-----	-----	-----

3. Is the supporting structure the same as that of another station(s) or proposed in another pending application(s)?

☒ Yes ☐ No

If Yes, give call letter(s) or file number(s) or both.

Tower Used By Motorola

If proposal involves a change in height of an existing structure, specify existing height above ground level including antenna, all other appurtenances, and lighting, if any.

No Change

## SECTION V-B - FM BROADCAST ENGINEERING DATA (Page 2)

4. Does the application propose to correct previous site coordinates?

☐ Yes ☒ No

If Yes, list old coordinates.

Latitude	0	'	"	Longitude	0	'	"
----------	---	---	---	-----------	---	---	---

5. Has the FAA been notified of the proposed construction?

☐ Yes ☒ No

If Yes, give date and office where notice was filed and attach as an Exhibit a copy of FAA determination, if available.

Exhibit No.  
N/ADate N/A Office where filed N/A

6. List all landing areas within 8 km of antenna site. Specify distance and bearing from structure to nearest point of the nearest runway.

	Landing Area	Distance (km)	Bearing (degrees True)
(a)	<u>None</u>	<u></u>	<u></u>
(b)	<u></u>	<u></u>	<u></u>

7. (a) Elevation: *(to the nearest meter)*(1) of site above mean sea level; 896.0 meters(2) of the top of supporting structure above ground (including antenna, all other appurtenances, and lighting, if any); and 48.8 meters(3) of the top of supporting structure above mean sea level  $[(aX1) + (aX2)]$  944.8 meters(b) Height of radiation center: *(to the nearest meter)* H = Horizontal; V = Vertical(1) above ground N/A meters (H)34.0 meters (V)(2) above mean sea level  $[(aX1) + (bX1)]$  N/A meters (H)930.0 meters (V)(3) above average terrain N/A meters (H)425.2 meters (V)

8. Attach as an Exhibit sketch(es) of the supporting structure, labelling all elevations required in Question 7 above, except item 7(bX3). If mounted on an AM directional-array element, specify heights and orientations of all array towers, as well as location of FM radiator.

Exhibit No.  
VB-1

9. Effective Radiated Power:

(a) ERP in the horizontal plane N/A kw (H\*) 0.500 kw (V\*)

(b) Is beam tilt proposed?

☐ Yes ☒ No

If Yes, specify maximum ERP in the plane of the tilted beam, and attach as an Exhibit a vertical elevational plot of radiated field.

Exhibit No.  
N/AN/A kw (H\*) N/A kw (V\*)

\*Polarization

10. Is a directional antenna proposed?

☒ Yes ☐ No

If Yes, attach as an Exhibit a statement with all data specified in 47 C.F.R. Section 73.316, including plot(s) and tabulations of horizontally and vertically polarized radiated components in terms of relative field.

Exhibit No.  
VB-6

11. Will the main studio be located within the 70 dBu or 3.16 mV/m contour?

☒ Yes ☐ No

If No, attach as an Exhibit justification pursuant to 47 C.F.R. Section 73.1125.

Exhibit No.  
N/A

12. Are there: (a) within 60 meters of the proposed antenna, any proposed or authorized FM or TV transmitters, or any nonbroadcast *(except citizens band or amateur)* radio stations; or (b) within the blanketing contour, any established commercial or government receiving stations, cable head-end facilities, or populated areas; or (c) within ten (10) kilometers of the proposed antenna, any proposed or authorized FM or TV transmitters which may produce receiver-induced intermodulation interference?

☒ Yes ☐ No

If Yes, attach as an Exhibit a description of any expected, undesired effects of operations and remedial steps to be pursued if necessary, and a statement accepting full responsibility for the elimination of any objectionable interference (including that caused by receiver-induced or other types of modulation) to facilities in existence or authorized or to radio receivers in use prior to grant of this application. *(See 47 C.F.R. Sections 73.315(b), 73.316(d) and 73.318.)*

Exhibit No.  
VB-2

13. Attach as an Exhibit a 7.5 minute series U.S. Geological Survey topographic quadrangle map that shows clearly, legibly, and accurately, the location of the proposed transmitting antenna. This map must comply with the requirements set forth in Instruction D for Section V. Further, the map must clearly and legibly display the original printed contour lines and data as well as latitude and longitude markings, and must bear a scale of distance in kilometers.

Exhibit No.  
VB-3

14. Attach as an Exhibit *(name the source)* a map which shows clearly, legibly, and accurately, and with the original printed latitude and longitude markings and a scale of distance in kilometers:

Exhibit No.  
VB-4

(a) the proposed transmitter location, and the radials along with profile graphs have been prepared;

(b) the 1 mV/m predicted contour and, for noncommercial educational applicants applying on a commercial channel, the 3.16 mV/m contour; and

(c) the legal boundaries of the principal community to be served.

15. Specify area in square kilometers (1 sq. mi. = 2.59 sq. km.) and population (latest census) within the predicted 1 mV/m contour.

Area 2428 sq. km.

Population 52,317

16. Attach as an Exhibit a map *(Sectional Aeronautical charts where obtainable)* showing the present and proposed 1 mV/m (60 dbu) contours.

Exhibit No.  
N/A

Enter the following from Exhibit above:

Gain Area N/A sq. mi.

Loss Area N/A sq. mi.

Percent change (gain area plus loss area as percentage of present area) N/A %.

If 50% or more this constitutes a major change. Indicate in question 2(c), Section I, accordingly.

17. For an application involving an auxiliary facility only, attach as an Exhibit a map (*Sectional Aeronautical Chart or equivalent*) that shows clearly, legibly, and accurately, and with latitude and longitude markings and a scale of distance in kilometers:

Exhibit No.  
N/A

(a) the proposed auxiliary 1 mV/m contour; and

(b) the 1 mV/m contour of the licensed main facility for which the applied-for facility will be auxiliary. Also specify the file number of the license. See 47 C.F.R. Section 73.1675. (File No.: N/A)

18. Terrain and coverage data (*to be calculated in accordance with 47 C.F.R. Section 73.313*).

Source of terrain data: (*check only one box below*)

☒ Linearly interpolated 30-second database

☐ 7.5 minute topographic map

(Source: \_\_\_\_\_)

☐ Other (*briefly summarize*)

Radial bearing (degrees True)	Height of radiation center above average elevation of radial from 3 to 16 km (meters)	Predicted Distances to the 1 mV/m contour (kilometers)
0	327.8	27.7
45	315.2	27.2
90	469.4	33.2
135	526.8	35.6
180	359.4	20.8
225	622.0	16.5
270	395.9	19.4
315	384.8	29.2

Allocation Studies See Table II

(See Subpart C of 47 C.F.R. Part 73)

19. Is the proposed antenna location within 320 kilometers (199 miles) of the common border between the United States and Mexico?

☐ Yes ☒ No

If Yes, attach as an Exhibit a showing of compliance with all provisions of the Agreement between the United States of America and the United Mexican States concerning Frequency Modulation Broadcasting in the 88 to 108 MHz band.

Exhibit No.  
N/A

20. Is the proposed antenna location within 320 kilometers of the common border between the United States and Canada?

☐ Yes ☒ No

If Yes, attach as an Exhibit a showing of compliance with all provisions of the Working Agreement for Allocation of FM Broadcasting Stations on Channels 201-300 under The Canada-United States FM Agreement of 1947.

Exhibit No.  
N/A

21. If the proposed operation is for a channel in the range from channel 201 through 220 (88.1 through 91.9 MHz), or if this proposed operation is for a class D station in the range from Channel 221 through 300 (92.1 through 107.9 MHz), attach as an Exhibit a complete allocation study to establish the lack of prohibited overlap of contours with other U.S. stations. The allocation study should include the following:

Exhibit No.  
VB-5

SEE ENGINEER STATEMENT - TABLE I, TABLE III

- (a) The normally protected interference-free and the interfering contours for the proposed operation along all azimuths.
- (b) Complete normally protected interference-free contours of all other proposals and existing stations to which objectionable interference would be caused.
- (c) Interfering contours over pertinent arcs of all other proposals and existing stations from which objectionable interference would be received.
- (d) Normally protected and interfering contours over pertinent arcs, of all other proposals and existing stations, which require study to show the absence of objectionable interference.
- (e) Plot of the transmitter location of each station or proposal requiring investigation, with identifying call letters, file numbers and operating or proposed facilities.
- (f) When necessary to show more detail, an additional allocation study will be attached utilizing a map with a larger scale to clearly show interference or absence thereof.
- (g) A scale of kilometers and properly labeled longitude and latitude lines, shown across the entire Exhibit(s). Sufficient lines should be shown so that the location of the sites may be verified.
- (h) The name of the map(s) used in the Exhibit(s).

22. With regard to any stations separated by 53 or 54 channels (10.6 or 10.8 MHz) attach as an Exhibit information required in 1/ *(separation requirements involving intermediate frequency (i.f.) interference)*.

Exhibit No.  
N/A

23.(a) Is the proposed operation on Channel 218, 219, or 220?

☐ Yes ☒ No

(b) If the answer to (a) is yes, does the proposed operation satisfy the requirements of 47 C.F.R. Section 73.207?

N/A  
☐ Yes ☐ No

(c) If the answer to (b) is yes, attach as an Exhibit information required in 1/ regarding separation requirements with respect to stations on Channels 221, 222 and 223.

Exhibit No.  
N/A

(d) If the answer to (b) is no, attach as an Exhibit a statement describing the short spacing(s) and how it or they arose.

Exhibit No.  
N/A

1/ A showing that the proposed operation meets the minimum distance separation requirements. Include existing stations, proposed stations, and cities which appear in the Table of Allotments; the location and geographic coordinates of each antenna, proposed antenna or reference point, as appropriate; and distance to each from proposed antenna location.

- (e) If authorization pursuant to 47 C.F.R. Section 73.215 is requested, attach as an Exhibit a complete engineering study to establish the lack of prohibited overlap of contours involving affected stations. The engineering study must include the following:

Exhibit No.  
N/A

- (1) Protected and interfering contours, in all directions (360°), for the proposed operation.
- (2) Protected and interfering contours, over pertinent arcs, of all short-spaced assignments, applications and allotments, including a plot showing each transmitter location, with identifying call letters or file numbers, and indication of whether facility is operating or proposed. For vacant allotments, use the reference coordinates as transmitter location.
- (3) When necessary to show more detail, an additional allocation study utilizing a map with a larger scale to clearly show prohibited overlap will not occur.
- (4) A scale of kilometers and properly labeled longitude and latitude lines, shown across the entire exhibit(s). Sufficient lines should be shown so that the location of the sites may be verified.
- (5) The official title(s) of the map(s) used in the exhibit(s).

24. Is the proposed station for a channel in the range from Channel 201 to 220 (88.1 through 91.9 MHz) and the proposed antenna location within the distance to an affected TV Channel 6 station(s) as defined in 47 C.F.R. Section 73.525? ☒ Yes ☐ No  
SEE ENGINEERING STATEMENT -TABLE I & TABLE IV

If Yes, attach as an Exhibit either a TV Channel 6 agreement letter dated and signed by both parties or a map and an engineering statement with calculations demonstrating compliance with 47 C.F.R. Section 73.525 for each affected TV Channel 6 station.

Exhibit No.  
VB-8

SEE ENGINEERING STATEMENT & TABLE IV

25. Is the proposed station for a channel in the range from Channel 221 to 300 (92.1-107.9 MHz)? ☐ Yes ☒ No

If Yes, attach as an Exhibit information required in 1/. (Except for Class D (secondary) proposals.)

Exhibit No.  
N/A

26. Environmental Statement (See 47 C.F.R. Section 1.1301 et seq.)

Would a Commission grant of this application come within Section 1.1307 of the FCC Rules, such that it may have a significant environmental impact? ☐ Yes ☒ No

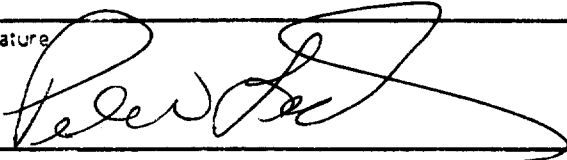
If you answer Yes, submit as an Exhibit an Environmental Assessment required by Section 1.1311.

Exhibit No.  
N/A

If No, explain briefly why not. The proposed operation is categorically excluded from environmental processing under the provisions of Section 1.1306 of the FCC Rules. See Exhibit VB-7.

#### CERTIFICATION

I certify that I have prepared this Section of this application on behalf of the applicant, and that after such preparation, I have examined the foregoing and found it to be accurate and true to the best of my knowledge and belief.

Name (Typed or Printed) PETER W. LECHMAN	Relationship to Applicant (e.g., Consulting Engineer) Telecommunications Consultant
Signature 	Address (Include ZIP Code) LECHMAN & JOHNSON, INC. 16201 Trade Zone Avenue, #108 Upper Marlboro, Maryland 20772
Date July 28, 1992	Telephone No. (Include Area Code) (301) 390-0900